



Dart Aerospace Ltd.
1270 Aberdeen St
Hawkesbury, ON
K6A 1K7
Canada

Tel (613) 632-5200

D5594-3

Job Sheet 180816

Accounting Job RD17-1048-01



Part No: D5594-3

Job Qty: 50 ea

Part Name: GH Washer



Part Weight: 0 lbs

Status: Scheduled

Priority: Medium

Job Created: 7/17/18

Job Tracking No:

Due Date: 7/27/18

Created By: Marie Lajeunesse

Type: R+D

Description:

Note: DWG D5594-3 Rev:A4 IPP Rev.A New Issue 18/06/20 JFS Verified by:DD

Ship Via:

PRELIMINARY ISSUE

POSITIVE RECALL

EFFECTIVE DATE 17 JUL 2018
DAS 31
RELEASED 9 DATE 15-004
@ Rev A FC153-57

Bill of Materials

Job Routing

Op No	Operation	Qty	Start Date	Due Date	Standard		Workcenter/Supplier		Sign-off
					Setup hrs	Run Hrs	Workcenter / Supplier	Lead Time	
90	Start up Operation	50 Ea	7/27/18	7/27/18	0.00	0.00	Start Up Machining		15/8/18 JBD
100	Hardinge	50 pcs	7/27/18	7/27/18	0.00	3.57	Hardinge		15/9/18 JBD
110	QC	50 pcs	7/27/18	7/27/18	0.00	0.00	QC2		15/8/18 JBD
120	QC	50 pcs	7/27/18	7/27/18	0.00	0.00	QC8		AUG 22 2018
130	Packaging	50 pcs	7/27/18	7/27/18	0.00	0.00	Packaging3		15-02-04
140	QC21-SA	50 Ea	7/27/18	7/27/18	0.00	0.00	QC21		

Part Op Descriptions: 100 - 1-Turn as per Folio FC153 Rev: ____ & Dwg D5594 Rev: ____ 2-Deburr

Job BOM

Part / Item	Component Name	Quantity	Operation	Container
M304R1.000	304 Round Bar 1.00	.6500 ft (.013 ea)	90-Start up Operation	

Job Allocations

Operation	Component Part	Required	Inventory	Allocated
90-Start up Operation	M304R1.000	1	31	0

Part Specifications

Specifications could not be found.

Plex 7/17/18 8:48 AM Dart.lajeunesse.marie

DQA: _____ Date: _____

WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date :		Step #:		QTY Effective :			MRB (QSI042) Approval 		
Description Work Order Deviation				Disposition					
				Completed By					
				Lead hand / Supervisor Approval Verification					
				QC / QA Coordinator Approval					
Root Cause		FAULT CATEGORY							
Environment ☐	No Re-verification ☐	Pressure/Forced ☐	Temperature/Cure ☐	Power Loss/Surge ☐	Positioned Wrong ☐				
Design ☐	Operator ☐	Bending ☐	Set-up ☐	Folio/Program ☐	Outside Dimensions ☐				
Doc/Data ☐	Offset/Setup ☐	Centre Not Concentric ☐	BOM/Route ☐	Grain ☐	Over/Under tolerance ☐				
Equip/Tooling ☐	Supplier ☐	Cracks ☐	Broken/Damage/Defect ☐	Weld ☐	Part Incorrect ☐				
Handling/Pre ☐	Training ☐	Crimp/Kink/Ripple/Wave ☐	Inspection Incomplete/Unqualified ☐	Wrong Stock Pulled ☐	Part Lost/Missing ☐				
Material ☐	Use for Testing ☐	Cuffs ☐	Contamination ☐	Out of Sequence ☐	Part Moved ☐				
Internal Transport ☐	Poor Information ☐	Crushing ☐	Countersink ☐	Off-set ☐	Drawing ☐				
Tribal Knowledge ☐	Rushing ☐	Heat Treat ☐	Cut Too Short ☐	Mislabeled ☐	Finish ☐				
LOA ☐	Product Improvement ☐	Wave/Twist in Tube ☐	Instructions Incomplete/Unclear ☐	Fit/Function ☐	Misread ☐				
Substation ☐	Process Improvement ☐	Marks/Chatter ☐	Drill Holes ☐	Misaligned/off center ☐	Turning Sequence ☐				
Past Expiry Date ☐	Manufacturing Process ☐	OTHER : _____							
Misidentified ☐	Past Due ☐								

DQA: _____ Date: _____



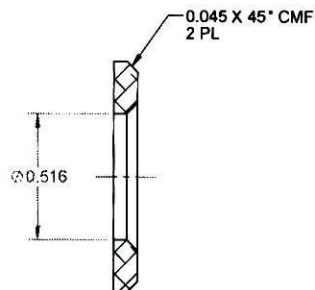
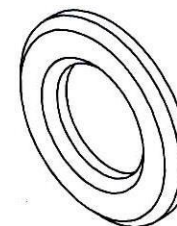
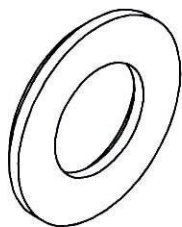
WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

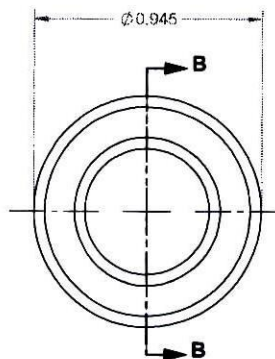
Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐	AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐			
Date : _____	Step #: _____	QTY Effective : _____		MRB (QSI042) Approval	
Description Work Order Deviation		Disposition		Completed By	
				Lead hand / Supervisor Approval Verification	
				QC / QA Coordinator Approval	
Root Cause		FAULT CATEGORY			
Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐	No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐	Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐	Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐	Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Misabeled ☐ Fit/Function ☐ Misaligned/off center ☐	Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐
OTHER : _____					

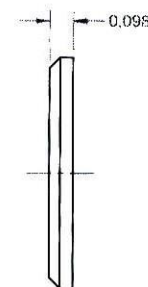
8 7 6 5 4 3 2 1



SECTION B-B



D5594-3 GH WASHER



SHOP COPY
RETURN TO
ENGINEERING
UNCONTROLLED COPY
SUBJECT TO AMENDMENT
WITHOUT NOTICE
WORK ORDER
NO. 180816 MW
180713

- NOTES:**
- 1) MATERIAL: AISI 304/316 STAINLESS STEEL ROUND BAR
 PER ASTM A276
 REF M304R
 OR: AISI 304/316 STAINLESS STEEL BAR
 PER ASTM A276 OR ASTM A240
 REF M304B
 - 2) FINISH: NONE
 - 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
 - 4) UNITS: INCHES UNLESS OTHERWISE NOTED
 - 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
 - 6) IDENTIFICATION: IDENTIFY PER DART QSI 044 6.7
 - 7) WEIGHT: 0.01 lbs

PRELIMINARY ISSUE

DESIGN	AJS	DART AEROSPACE LTD	
DRAWN	NO	HAWKESBURY, ONTARIO, CANADA	
CHECKED	ZF	DRAWING NO.	REV. A4
MFG. APPR.	JFS	D5594	SHEET 2 OF 2
APPROVED		TITLE	SCALE
DE APPR.		GH COMPONENTS (EC130)	NTS
DATE	17.10.31	COPYRIGHT © 2017 BY DART AEROSPACE LTD THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD.	

8 7 6 5 4 3 2 1

DQA: _____ Date: _____

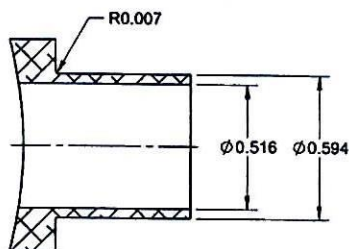
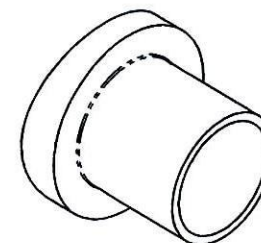
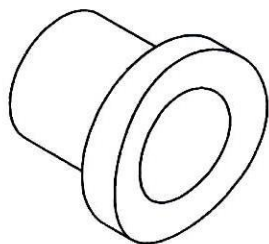
WORK ORDER NON-CONFORMANCE / UPDATE



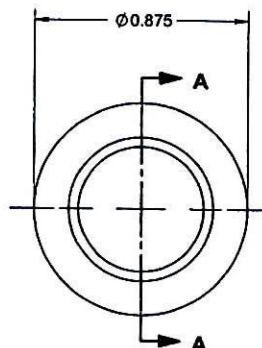
QA Closed: _____ Date: _____

Work Order update only ☐

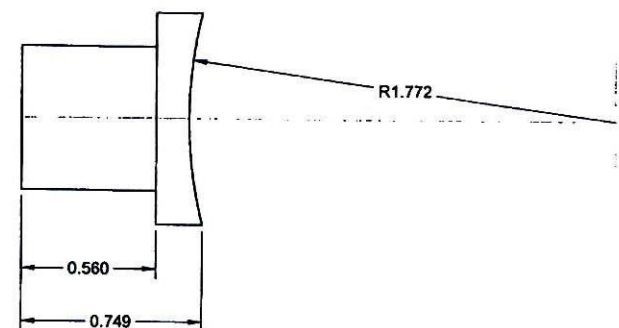
Work Order: _____ Part No. _____ NCR No. _____	DISPOSITION Rework ☐ Scrap ☐	AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Cross tube ☐ Small Fab ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Engineering ☐ Quality ☐ Other ☐				
Date : _____	Step #: _____	MRB (QSI042) Approval 				
Description Work Order 		Completed By 				
Dart Aerospace Ltd. 1270 Aberdeen Street Hawkesbury, ON K6A 1K7 CANADA TEL.: 1 813 632-5200 Email: sales@dartero.com www.dartaerospace.com Container No: S104022 Part: D5594-3 Job No: 180816 Serial No/Batch: S104022 Revision: A4 Inspector: _____ Exp Date: _____ Instructions: Various STC's Date: 06/21/16		Lead hand / Supervisor Approval Verification 				
Root Cause <table style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 50%;"> Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐ </td> <td style="width: 50%;"> No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐ </td> </tr> </table>		Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐	No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐	QC / QA Coordinator Approval 		
Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐	No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐					
Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐		BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐				
OTHER : _____		<table style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 50%;"> ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Mislabeled ☐ Fit/Function ☐ Misaligned/off center </td> <td style="width: 50%;"> ☐ Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence </td> </tr> </table>			☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Mislabeled ☐ Fit/Function ☐ Misaligned/off center	☐ Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence
☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Mislabeled ☐ Fit/Function ☐ Misaligned/off center	☐ Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence					



SECTION A-A



D5594-1 GH BUSHING



NOTES:

- 1) MATERIAL: AISI 304/316 STAINLESS STEEL ROUND BAR
PER ASTM A276
REF DART SPEC M304R
OR
AISI 304/316 STAINLESS STEEL BAR
PER ASTM A276 OR ASTM A240
REF DART SPEC M304B

- 2) FINISH: NONE
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
- 6) IDENTIFICATION: IDENTIFY PER DART QSI 044 6.7
- 7) WEIGHT: 0.03 lbs

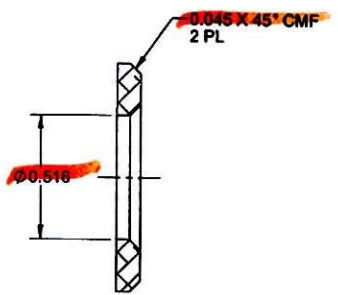
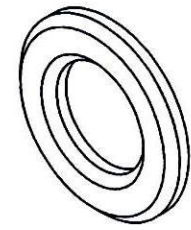
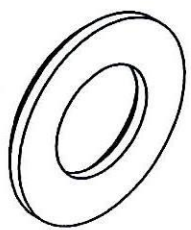
RELEASED

2018 OCT 02
ECN 18-617

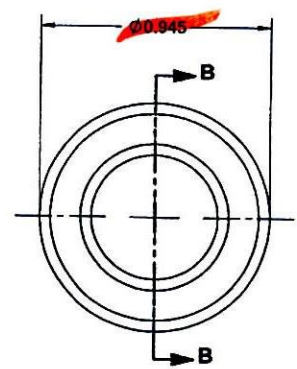
APPROVED

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DRAWN	ZF				
CHECKED	MW	DRAWING NO.		REV. A	
MFG. APPR.	JFS	D5594		SHEET 1 OF 2	
APPROVED	NO	TITLE		SCALE	
DE APPR.	CP	GH COMPONENTS (EC130)		NTS	
DATE	17.10.31	COPYRIGHT © 2017 BY DART AEROSPACE LTD THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD.			

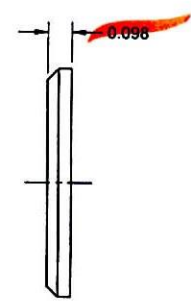
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SECTION B-B



D5594-3 GH WASHER



- NOTES:**
- 1) MATERIAL: AISI 304/316 STAINLESS STEEL ROUND BAR
PER ASTM A276
REF DART SPEC M304R
OR
AISI 304/316 STAINLESS STEEL BAR
PER ASTM A276 OR ASTM A240
REF DART SPEC M304B
 - 2) FINISH: NONE
 - 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
 - 4) UNITS: INCHES UNLESS OTHERWISE NOTED
 - 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
 - 6) IDENTIFICATION: IDENTIFY PER DART QSI 044 6.7
 - 7) WEIGHT: 0.01 lbs

RELEASED
2018 OCT 02

APPROVED

DESIGN	AJS	DART AEROSPACE LTD	
DRAWN	ZF	HAWKESBURY, ONTARIO, CANADA	
CHECKED	MW	DRAWING NO.	REV. A
MFG. APPR.	JFS	D5594	SHEET 2 OF 2
APPROVED	NO	TITLE	SCALE
DE APPR.	CP	GH COMPONENTS (EC130)	NTS
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8 7 6 5 4 3 2 1